

REMARKS/ARGUMENTS

The foregoing amendment and the following arguments are provided to impart precision to the claims, by more particularly pointing out the invention, rather than to avoid prior art.

35 U.S.C. § 103(a) Rejections

Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable by U.S. Patent No. 6,121,852 (hereinafter "Mizoguchi '852").

Claim 7 includes a limitation of a magnetic layer over a first dielectric layer to reduce eddy currents. Mizoguchi '852 does not include such a limitation, and therefore claim 7 is patentable over Mizoguchi '852. Specifically, Mizoguchi '852 teaches a distributed constant element having a conductor line in between an upper and a lower magnetic layer (Col. 14, lines 48-61). The structure in Figures 23A-B (the inner conductor line structure) of Mizoguchi '852 includes two magnetic plates, while the structure of Figures 11 and 12 (the parallel line structure) includes only one. Mizoguchi '852 also teaches that the inner conductor line structure cannot be used at high frequencies, since an eddy current is generated due to an interlinkage of magnetic flux and the inner conductor line (Col. 15, lines 51-57). Mizoguchi '852 specifically teaches that the inner conductor line structure *cannot be used at high frequencies because of eddy currents*. Therefore, because eddy currents are clearly present in the inner

conductor line structure of Figures 23A-B, the magnetic plates taught by Mizoguchi '852 do not reduce eddy currents as in claim 7, and claim 7 is patentable over Mizoguchi '852.

Further, Figures 11-12 and Figures 23A-B of Mizoguchi '852 teach away from a combination with each other. Specifically, as mentioned above, the inner conductor line structure specifically cannot be used at high frequencies (Col. 15, lines 51-57). On the other hand, the  $\frac{1}{4}$  wavelength tuning frequency of the transformer in Figure 11 is set to 1.5 GHz, which is a very high frequency (Col. 11, lines 4-5). Therefore, if one were to combine the inner conductor line structure with the parallel line conductor structure, the resulting structure would no longer be operational at high frequencies due to eddy currents, and the function of the parallel line structure, which is designed to operate at 1.5 GHz, would be destroyed. Also, in the parallel line structure, the magnetic layer functions as an electrode of distributed capacitance. For the inner conductor line structure, the magnetic layer serves as a grounded layer (Col. 16, lines 11-19). Since the magnetic layer has a different function in the two different structures, this also suggests that their combination would destroy the functionality of the parallel line structure. Finally, Mizoguchi '852 repeatedly states that the characteristics of the first and second (parallel line type) embodiments are essentially the same (See, e.g., Col. 10, lines 55-60, Col. 11, lines 23-27, etc.). Nowhere does Mizoguchi '852 state that the second and third (inner conductor line type) embodiments have the same characteristics. Therefore, their combination would lead to unpredictable results, and cannot be suggested by Mizoguchi '852. As a result, claim 7 is patentable over Mizoguchi '852.

Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable by Mizoguchi '852 in view of U.S. Patent No. 6,404,317 (hereinafter "Mizoguchi '317").

Claim 6 includes a limitation of at least one slot independent of a shape of a conductor. Mizoguchi '317 teaches where a magnetic layer has a spiral groove that extends exactly along the spiral conductor of a coil (Col. 18, lines 41-44, Col. 20, lines 44-58). Mizoguchi '317 teaches that the groove must follow the conductor, and that the coil and the groove is shaped to provide four axes of easy magnetization. Neither Mizoguchi '852 nor Mizoguchi '317 teach at least one slot independent of a shape of a conductor, as in claim 6. Therefore, claim 6 is patentable over Mizoguchi '852 in view of Mizoguchi '317.

Further, Mizoguchi '852 suggests that the use of a spiral conductor is undesirable because eddy-current-losses of the coil would result in a low Q value (Col. 1, lines 50-65). Mizoguchi '317 teaches a spiral coil, and a groove in a magnetic layer which must extend along the spiral coil (Col. 20, lines 44-58). Further, the spiral groove is necessary in Mizoguchi '317, because the spiral groove gives the four triangular regions of the magnetic layer axes of easy magnetization. Since Mizoguchi '852 teaches against using a spiral conductor, and Mizoguchi '317 requires the spiral conductor with a spirally grooved magnetic layer, Mizoguchi '852 does not suggest, and indeed teaches away from a combination with Mizoguchi '317. Therefore, claim 6 is patentable over Mizoguchi '852 and Mizoguchi '317.

Examiner rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable by Mizoguchi '852 in view of U.S. Patent No. 6,404,317 (hereinafter "Mizoguchi").

Claim 8 depends from claim 7, and therefore includes all the limitations of claim 7. Since claim 7 is patentable over Mizoguchi '852, claim 8 is patentable over Mizoguchi '852 and Mizoguchi '317.

Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable by U.S. Patent No. 6,121,852 (hereinafter "Mizoguchi") in view of JP 6-124843.

Claim 9 depends from claim 7, and therefore includes all the limitations of claim 7. Since claim 7 is patentable over Mizoguchi '852, claim 9 is patentable over Mizoguchi '852 and JP 6-124843.

Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable by U.S. Patent No. 6,121,852 (hereinafter "Mizoguchi") in view of "Influence of In-Plane Anisotropy and Eddy Currents on the Frequency Spectra of the Complex Permeability of Amorphous CoZr Thin Films", Fessant, et al., IEEE 1993.

Claim 5, like claim 7, includes a limitation of a magnetic layer over a first dielectric layer to reduce eddy currents, and a limitation of another magnetic layer over a conductor. Figures 11-12 of Mizoguchi '852 teach only one magnetic layer. Figures 23A-B of Mizoguchi '852 teach two magnetic layers, and therefore the Applicant regards the arguments made above with respect to claim 7 as also

applying here. Also as above, Mizoguchi '852 does not teach a magnetic layer to reduce eddy currents. Fessant also does not teach a magnetic layer to reduce eddy currents. Therefore, claim 5 is patentable over Mizoguchi '852 in view of Fessant.

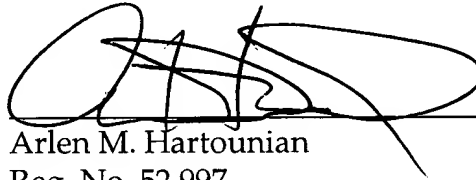
CONCLUSION

Applicant respectfully submits the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Arlen M. Hartounian at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN



Arlen M. Hartounian  
Reg. No. 52,997

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12400 Wilshire Boulevard  
Seventh Floor  
Los Angeles, CA 90025-1026  
(408) 720-8300